THE SEWING-MACHINE.

Its Origin: Introduction into General Use; Progress and Extent of its Manufacture—A Great Machine-Shop Described.

SEWING-MACHINE PATENTS.

The first patent granted in this country for a machine to sew, as a substitute for hand-labor, was issued Feb. 21, 1842, to John J. Greenough of Washington City, but, so far as we can ascertain, his invention, whatever it was, was of no practical use to the world, as no machine, except the model, was ever built.

The second patent was dated March 4, 1843, issued to Benjamin W. Bean of New-York City. This, though called a sewing-machine, was quite unlike any now in use. The cloth was corrugated, and a long needle thrust through the fold, and then the cloth being straightened, was held together somewhat as it is by basting by hand. Probably no machines were ever built for sale, but we find a patent for the same model reissued March 10, 1849.

The third sewing-machine patent was granted Dec. 27, 1843, to Geo. R. Corlies, Greenwich, N. Y., for a machine similar to Greenough's. No machines were made for use, except by the inventor, so far as we can learn.

ENGLISH INVENTIONS.

The Edinburgh Encyclopædia, Vol. V., 1832, contains the first notice that we can find of the invention of a sewing-machine, though it is not described by that name, but as a "tambouring-machine." It is described as having an automatic feed motion, and a "piston needle." We find an American machine, known as "Robinson's hand-sewing machine," with just such a needle, which threads and unthreads at every stitch: the eye being made with a slide that opens and shuts, and makes a stitch like hand-sewing. Neither the Edinburgh machine nor the Robinson machine has proved practically successful.

In May, 1829, a patent was granted in London to Henry Bock for a "tambouring-machine," the needle having "two points and one eye." But tambouring is not sewing; and we believe no sewing-machine has ever been invented in England, though some patents have been granted for improvements, or pirating, upon Howe's Machine, which was introduced and manufactured there before it was perfected here.

NUMBER OF AMERICAN PATENTS.

The number of patents granted in this country for sewing-machines, or "improvements," is remarkable. Three years ago we examined the records of the Patent-Office at Washington, and found that some two hundred patents had been issued, and, what is very remarkable, one hundred and ninety-four of them had been issued since the middle of the year 1851. It was about that time that the public mind became fully impressed with the important fact that the invention was a practical one, and that henceforth the great work of the needle would be done by machinery.

The number of patents granted prove the sewing-machine an American invention. It proves, too, how fully awake the public mind has become to its importance, though at first it was slow to believe that the sewing-machine would ever have a place among household gods around American hearthstones. The idea of doing family sewing on a machine was declared preposterous, even after it was conceded that the invention would be very useful for manufacturers of clothing.

HOWE'S PATENT.

The patent which laid the foundation of a fortune to the inventor, and upon which all practical improvements have been raised, and which has almost revolutionized all kinds of manufactures of clothing, was issued Sept. 10, 1846, to Elias Howe, jr., of Cambridge, Mass. The original idea of the inventor was a "lock stitch," and this has never been lost sight of in all subsequent improvements and modifications of the original machine. The original model, which we have seen, bears but little resemblance to that beautifully polished and gold-and-silver ornamented machine that thousands stop to admire in the show-window of the Wheeler & Wilson Company, No. 505 Broadway. The design of Howe's original machine was to hold the cloth perpendicular in front of the machine, and move it by hand. Through the loop of the thread of each stitch a little shuttle passed back and forth on a lubricated slide, inserting a thread that locked the stitches, just as they are now locked in the Wheeler & Wilson Machine, though the result is obtained by very different means, and with a much less expenditure of power. There is no doubt that Howe was the original inventor and maker of the first practical sewing-machine ever utilized in this country or Europe, though attempts to produce such a machine had been made previous to his original efforts.

ORIGIN OF THE INVENTION.

The successful originator of the sewing-machine was an apprentice in the shop of a Mr. Davis, in Boston, some three or four years before the date of his patent, where he heard his employer say to a person who inquired, "Can you make a knitting-machine?"

"Yes; or a sewing machine."

"Can you?" the man replied. "If you can, I will insure you an independent fortune."

The words sewing-machine and independent fortune rang in the ears of the young Yankee inventor. That was the origin of the sewing-machine. From that moment his mind never rested, though he had no idea how the machine was to be made, or fortune acquired. He had not much idea of the latter even after he had accomplished the former.

THE INFANCY OF SEWING-MACHINES.

Important as the invention has proved, the public was slow to see it, and, like many others, it did not bring that "independent fortune" till after years of hope deferred. The infancy of sewing-machines needed much nursing, and the invention came near perishing before it was appreciated.

After long toiling and experimenting, Mr. Howe obtained a patent; but he had spent his last dollar, and no one was willing to lend or embark another in such a Utopian enterprise as manufacturing sewing-machines.

For a certainty, no one had the power of "second sight" to enable him to see the palatial sewing-machine emporiums that attract the curious upon Broadway; nor had any one a vision of such a mammoth establishment as that of the Wheeler & Wilson Company at Bridgeport, where two acres of ground are covered with buildings, with steam machinery sufficient to manufacture three hundred sewing-machines every day.

If those who had money for profitable investment could have seen in imagination what we have in reality, the inventor would not have gone to England in hopes of meeting better success there than here, where he met only with disappointment. But he met with little else abroad, and soon found that he must stay and starve before the English people would appreciate the advantages of his invention—advantages that they have since learned, but not to the profit of the inventor.

So poor was he at this time that he "worked his passage" home in a sailing ship, and landed in New-York penniless, but full of that indomitable Yankee energy that cannot be put down by adverse circumstances. He knew, if the world did not, that he had a machine that would some day be appreciated.

IMPROVEMENTS ON HOWE'S MACHINE, AND INNOVATING PATENTS.

Howe's patent was dated Sept. 10, 1846. The next issued was dated Nov. 28, 1848, to John A. Bradshaw, Lowell, Mass., for a contrivance to give a continuous tension to the thread as it unwound from the bobbin and passed through the eye of the needle May 8, 1849, John Bachelder of Boston took a patent to regulate the feeding of cloth automatically to the machine, and Jonathan S. Conant of Dracut, Mass., took one of the same date, for the same purpose, by a different arrangement. These were issued as "improvements" upon Howe's Machine.

October 2, 1849, Blodget & Lerow of Boston obtained a patent, since decided as an evasion of Howe's patent, because it made the "lock-stitch," but by a different method; the shuttle performing a circuit instead of running back and forth.

This evasion of Howe's patent was a benefit to him, because it occasioned a good deal of talk, and as many of the machines were made and put in operation, the public began to realize that sewing could be done by machinery.

WILSON'S SEWING-MACHINE PATENTS.

The most important of all the sewing-machine patents ever granted are those made to A. B. Wilson of Pittsfield, Mass.; the first, Nov. 13, 1850. This was for a two-fold improvement of the Howe Machine. He recognized the "lock-stitch" as the *sine qua non*; but as it was obtained in Howe's Machine by moving a shuttle along a slide, which must be kept well lubricated, and required some power, and had to go and return for every stitch, Wilson undertook to produce the same result at each move of the shuttle.

The other improvement of Wilson was in the "feed motion," now almost universally adopted by all manufacturers of sewing-machines, and by which stitches are easily regulated, long or short, as desired.

A still greater improvement was patented by Mr. Wilson Aug. 12, 1851. This we look upon as the most ingenious, as well as the most important, of all the improvements that have been patented.

THE ROTATING HOOK—ITS OPERATION.

The ingenuity of this contrivance is wonderful from its remarkable simplicity; it dispenses with the dirt of lubrication, and requires no addition to the power needed to drive the machine, while the stitches are made more rapidly. A good deal of time is also saved in winding the bobbins to form the lock-stitch.

This invention of the "rotating hook" is that which has given character to the Wheeler & Wilson Machine, and although the stitch is the same as that originally produced by Howe, he readily acknowledges that it is done by a more simple and ingenious method.

This "rotating hook" is upon the end of the main shaft that moves all the work, and is carved out of solid steel by a series of the most ingenious machines that we ever saw in operation. Indeed it could not be made by any other means, so that every one would be perfect and exactly like every other one. As it revolves it seizes the loop of the thread in the needle the instant it passes through the cloth, opens it out and carries it around the bobbin, so that the thread is then passed through the loop of the stitch; this is then drawn up with the thread in the needle, so that the two are looped together about half-way through the cloth, forming the strongest possible seam, showing the stitching exactly even upon both sides, with no threads above the surface to wear off and allow the seam to rip. It is hardly possible that any mechanical operation can be conceived that is more simple and effective than this invention of A. B. Wilson.

The patent for the rotating hook was the thirteenth of the series of sewing-machine patents, two having been issued between the dates of his two patents—one Aug. 1, 1857, to Aikin & Felthousen of Ithica, for a plan of "tightening the stitch after the manner of hand-sewing." Another was granted for the same purpose Aug. 12, 1851, to I. M. Singer of New-York, who has since become famous for sundry other patents connected with the business, and for the manufacture of "Singer's Sewing-Machines." These retain Howe's shuttle movement, and pay royalty to him, as do also the Grover & Baker Machines, as well as Wilson's and several others, which retain his lock-stitch, and without which good sewing cannot be done by machinery.

SINGLE-THREAD SEWING-MACHINES.

The first patent for a single-thread sewing-machine was issued Feb. 6, 1849, to J. B. Johnson and Chas. Morey, and so far as we are able to judge, contains the principle of all the single-thread machines since patented. These single-thread machines make a sort of tambour, or knitting stitch, by continuously looping the thread, and pushing the needle through the loop, thus forming a chain of stitches in a ridge on the under side of the cloth.

The Grover & Baker Machine makes a similar ridge, though it works two threads, and makes a lock-stitch, which is undoubtedly very strong, and is claimed to be "elastic," but in our opinion is not so neat as the one made by the Wheeler & Wilson Machine, and requires a good deal more thread. Indeed this is the great fault found with all of the single-thread machines.

The invention and introduction of these single-thread and low-priced sewing-machines have served one good purpose, as they have pioneered the way for those of a superior character, though it has in most cases been at the expense of the people, as many a cheap machine has been purchased and used awhile to plague the owner, and then thrown aside for a Wheeler & Wilson. These rank first among the truly valuable lock-stitch machines, making a stitch that cannot ravel, nor rip, though a stitch should be cut every inch along the seam.

In an economical point of view, the invention of single-thread machines has not been profitable to the world. They are not generally denounced by the manufacturers of the lock-stitch sort, for the reason already stated—they serve their purpose, and sell high-priced machines more than they hinder their sale.

OBJECT OF PATENTING IMPROVEMENTS.

Some of the patents granted have been for real improvements and ingenious contrivances; but others have been obtained almost solely for the purpose of enabling the patentee to make and sell a machine with his own name as patentee engraved upon it, while in reality the only thing of value in it belonged to another. Therefore we do not follow out the long list of patents that have already been issued, but will speak of the manufacture of those most popular with the public.

THE MANUFACTURE OF SEWING-MACHINES.

Very few persons have an idea of the magnitude which the manufacture of sewing-machines has attained in this country.

The following persons and companies pay a royalty to Mr. Howe, who obtained last year a renewal of his patent for seven years from September, 1861:

The Wheeler & Wilson Company, whose manufactory is at Bridgeport, Conn., and salesroom at No. 505 Broadway.

The Grover & Baker Company, whose manufactory is at Boston, and principal sales depot in Broadway, N. Y.

I. M. Singer & Co., New-York.

Finkle & Lyon, N. Y.

Wilson H. Smith, Birmingham, Conn.

The Florence Sewing-Machine Company, Florence, Mass.

The Parker Sewing-Machine Company, Madison, Conn.

Charles W. Howland, Wilmington, Delaware.

Miles Greenwood & Co., Cincinnati, Ohio.

N. S. C. Perkins, Norwalk, Ohio.

These firms manufactured and sold, in the year 1861, 38,285 machines; 19,725 of which were made at the mammoth establishment of the Wheeler & Wilson Company at Bridgeport.

There is, or was, a sewing-machine manufacturing company at Richmond, Va., but, "owing to circumstances," we can get no returns of the number made at that establishment.

A brother of Mr. Howe also manufactures a small number in New-York, and of a style very much liked for some purposes.

So much for the history of the invention; now let us see how the machines are made.

A DAY IN A SEWING-MACHINE MANUFACTORY.

It is a wonder always to see what has been and can be done by ingenious mechanists. We do not know where ingenuity has been more developed than in the Wheeler & Wilson machine shops at Bridgeport.

We cannot describe all the curious processes by which a hundred machines are finished every day, but we will try to give some general idea of the wonderful art, skill, power, and appliance of machinery that go to the making of a sewing-machine.

The least costly, though heaviest part of the machine, is cast iron. For instance, the legs, the treadle, the fly-wheel, the bed-plate, and several minor parts.

Let us suppose a load of pig iron placed upon a car at the Lehigh, Pa. mines, and run directly into the works, which are connected by a side track with the New-York and New-Haven Railroad, and from that into the furnace, thence into the molds which cover the floor of one immense room, and employ a score of men.

From the foundery the castings are taken upon small railways to the first floor of the finishing shop, which is a three-story building, 36 feet wide and 550 feet long, with lines of shafting from end to end of each floor, which drive two or three tiers of machines upon the center of the floor and lines along each well lighted side. It is a glorious sight to look through all these windows from the cars which pass along the front, when all ablaze with burning gas, which is made upon the spot, to supply the 600 burners required by the workmen.

HOW THE CAST IRON IS PLANED AND BORED.

This was a tiresome job when all was done by hand; when each part of each machine was fitted to its fellow by cutting and filing, and when the parts of two machines must be kept separate. Now all are so exactly alike that a thousand pieces are finished and thrown into a box together, and each one forming a part of a machine, and never requiring the stroke of a file to adjust it, though the parts may be a thousand miles away from each other.

Here is a man just taking a bed plate from a great pile just unloaded from the foundery. Let us follow him. It is but a step to a strong machine, upon which he places it, and by a touch of a lever the machine is at work and needs no attention until its work is done, and then it stops of its own motion. This operation planes the bottom of the bed plate, and forms the foundation upon which all the parts are adjusted. It is not planed as quickly as a pine board, but just as true, and almost as easily. After starting this the man moves along to the next machine, which is at work cutting the top of a bed plate and fitting it to receive the several parts to be attached to it. To insure perfect accuracy these plates—as well as every other part, in all their changes from one machine to another, for all the cutting and boring—are fixed upon hardened steel guides, so that it is impossible for one cut to be made amiss, or a hole to be bored wrong because, before it can begin to bore the drill must pass through the guide hole in the steel plate.

Each machine is fitted to do one kind of work and no other. Thus, as the bed plate is planed upon the bottom in one, it is planed on the top in another, and another cuts away such parts of the metal as may be necessary, and another bores a certain portion of the holes, and then it is passed along.

So it is with the smallest piece of cast or wrought iron; one may pass through half a dozen machines before it is finished.

SCREW MACHINES.

Even the small screws are made upon machines that would cost some $400 each. An iron rod, large enough to form the head of the screw is inserted upon one side, and a tool brought up to the end of the rod, which, revolving, cuts away the metal to the size required; then the thread is cut, and then another cutter forms the head and another cuts it off. It goes afterward to the machine that cuts the groove in the head, and another that polishes it ready for use, or for the silver plating, all of which, as well as gilding, japanning, and other ornamentation is done in a large building devoted to that purpose.

We cannot describe minutely all the curious operations involved, but there is one that is worthy of a special notice, because it is a most remarkable piece of mechanism in itself, and because it has called forth a wonderful degree of ingenuity to produce it perfectly.

HOW THE ROTATING HOOK IS MADE.

We have now lying before us, upon the desk where we write, one of the rotating hooks which gives the Wheeler & Wilson sewing-machine a value, in our opinion, that no other machine can possess. We will try to tell how it is made.

But first, if you have one of these machines examine, as far as you can, this part of it. Take out the little bobbin (which carries the lower thread) and which in itself is a curiosity. You will observe how elaborately the metal has been cut away, and how impossible it would be to do it accurately by hand except by an enormous outlay of work.

That hook has passed through more than a hundred different operations, and the hands of several skillful workmen, aided by some of the most wonderful machines ever invented, each man and machine doing the particular allotted part to bring it from the black looking bolt to the beautiful polished article now lying side by side in our sight.

The long round rods of steel, which are half inch in diameter, are put into a machine which accurately measures and cuts them up in proper lengths. These are then put in a furnace so constructed that it heats only one end of the rods, which are taken from the fire and set hot end up in a hole in an anvil, over which are four steam hammers, which drop at a touch some five feet and rise again immediately. The first blow partially forms the head, which is reheated and placed under the second hammer, which completes it so that it is like the round head of a screw bolt, 1¼ inches across and ⅜ of an inch thick. Two blows from two other hammers make the depression in the head, which, slight as it is, will save tuns of steel by and by, which would be lost if left to be cut out in the lathe. Now commences a series of operations by turning, sawing, cutting, carving and polishing this rough steel bolt, by which the beautifully finished article is ultimately produced. The whole of the machinery is curious, but the one that was invented by one of the workmen in the establishment, to make all the delicate and accurate cuts required to give the form that makes the hook cast off the loop of the thread at the exact instant, is indeed a wonderful piece of mechanism.

HOW THE NEEDLES ARE MADE.

This branch of the business forms an interesting feature of the sewing-machine manufacture. In one of the long rooms that we have mentioned, seated in the strong light of one of the broadsides of windows, we found a gang of men making needles, each one doing a particular portion of the work.

We will say nothing of the labor of digging the ore and carting it to the furnace where the pig iron is made, nor of the process of converting that into bars of wrought iron, nor how steel is made of iron, nor how much labor it requires to reduce the steel bars to rods, and the rods to fine wire, out of which the needles are made; but we will start with the wire as it unrolls from the coil at one end of the long bench, and see it pass through all this long line of busy hands, until it comes out in finished needles at the other end.

The first man brings the wire under the operation of a cutting-machine, which divides it into lengths suitable to make two needles. These pieces are then placed singly upon a little anvil, upon which a hammer drops and forms the groove at the eye, and at the same time compresses the wire more firmly together, and develops any flaw that may exist. These dies are so formed that a portion of the metal is swedged off at the sides of the wire toward the point, and the square form given to the head of the needle.

The next operation is drilling the eyes. This, to one who has never seen this delicate and curious operation, must appear to be a very slow one, and fatiguing to the eyes of the operator, and the cause of the principal part of the expense of making needles. We found that "practice makes perfect," in this branch as well as others, and that the work is done much more rapidly than we had thought possible. The man takes about a dozen needles between the thumb and finger of the left hand, bringing them one after another under the point of the drill, which is running constantly in an upright position on the bench before him, and we observed that each needle as it approached the drill, seemed to place itself, so slight was the touch of the operator, in the exact position necessary for the operation, and that the eyes were bored faster than we can write the words describing how it was done.

From the driller the needles pass along the line of workmen successively to one who holds each a moment in a little machine that cuts away the surplus metal toward the point; to another who grinds and finishes up the points on an emery wheel; to another, who cuts the two needles apart; to another, who finishes the heads; and so on, operation after operation, until the needle is finished. Every needle is handled separately many times. Every eye is carefully smoothed by having a thread saturated with oil and coated with fine emery passed rapidly back and forth through it by hand.

Every needle has to be bent to the exact shape required; and, finally, after being tempered, every one is subjected separately to a severe test, to prove its temper, and all carefully examined as to finish, before they are counted and packed for sale.

The most tedious and expensive part of the process appeared to us to be the polishing of the eyes; as each needle has to be separately threaded, the end of the thread being held in the left hand, the needle is moved rapidly by the right hand until finished. We were told that this process was peculiar to this establishment. In the manufactories of common needles, they are strung in quantities upon copper wires, and those attached to revolving wheels, working in oil and emery, so that the eyes are polished by a mechanical operation, which cannot be applied to sewing-machine needles, owing to the situation of the eyes near the points. It is the great amount of hand labor, in a country where mechanics' wages are so much higher than in Europe, that makes this kind of needles so expensive. All attempts to substitute the cheap labor of England in the manufacture of needles for American sewing-machines have proved abortive.

The Wheeler & Wilson Company have several times hired English needle-makers, who had served a long apprenticeship at the business, and in all cases found them inferior to Americans, who had no previous knowledge of the business. The latter were ready to learn; the former hard to unlearn.

HOW TO INSURE ACCURACY.

Beside the accuracy of machinery, each workman is provided with a hardened steel gage for the particular work at which he is employed, the standard of which is kept in the iron safe in the superintendent's office. Then, as most of the men work by the piece, each day's work of a finisher is carried to the inspection room, and if all passes inspection the workman is credited, so that they earn from $2 to $5 a day.

From the inspector's room the parts are taken, as required, to the plating, gilding, japanning, and ornamenting rooms, and to the workmen who put the machines together, all of which, after being carefully adjusted, are thoroughly proved, but are never ready for sale until they have passed a final inspection by a man who sees that each one works perfectly, no matter whether a high or low cost one, and that each has its quota of needles and bobbins and little tools. When packed for shipment the cases are lowered from the inspection room and placed directly upon cars of the New-York and New-Haven railroad.

THE STEAM POWER.

The machinery of the iron shop is driven by twin engines, each rated at 85 horse-power, so that both may run together or separate, as may be convenient, when cleaning or repairing. The work shops are all warmed by steam. The machinery of the wood shop, which is on the other side of the quadrangle, is driven by another engine.

THE WOOD WORK FOR CASES, &C.

This branch of the establishment is much more extensive than we anticipated. We judge it must occupy one hundred workmen. In making tables, all are formed of layers of wood crossing the course of the grain, five layers deep, firmly glued and pressed together, so they can neither split nor warp.

The cases, some of which are very rich rosewood, or other costly material, are made in the same way. We counted some of the sides of the cases in course of construction, of ten thicknesses.

Then there is a vast quantity of lumber made into packing boxes, in which machines are shipped to almost all parts of the civilized world.

The same skill is exercised in the wood department that we found in the iron, by substituting machinery for manual labor, so that one man, on the average, does as much as ten men could without machinery, and by this means places it out of the power for individuals to compete in the manufacture of machines, if there were no patents to interfere.

THE MEN WHO MAKE SEWING-MACHINES.

There is a study in the men as well as the machines. If these are specimens of "Northern mudsills," the superstructure of society never can be shaken down. Here is a man with his shirt sleeves rolled up, and his arms begrimed with oil and iron, who was the representative of the town last year in the State Legislature, and who worthily filled the station.

Here is another who we suppose is worth $50,000. And here are scores of them who own these neat, handsome dwellings scattered around East Bridgeport, who live in comfort and independence.

Do you believe they are men of intelligence? Look at them. Watch them as they issue in a stream from the workshops on their way to dinner. There is not a stolid face in the whole 400.

Look at that mail bag in the cashier's room! It will hold half a bushel. It often goes out full of letters of a Monday morning. Mark! men who go to church regularly, and most of these do, and write half a bushel of letters on Sunday, don't spend much time at the ale-house. Every one of them reads his newspaper. They are "Northern mechanics;" they make sewing-machines, but they are men.

THE STEAM FIRE ENGINE.

What have we here? One of the most beautiful steam fire-engines of the age. It cost $4,000, and the hose carriage $500 more, and it is called the "Seamstress," and it is manned by 118 of these sewing-machine makers. "And here, across the way," says the President of the Company, "we are building them a hall and a room for their engine, and here is their tasteful uniform that they will proudly parade in when all is complete." Besides the fire company, there is an artillery company and a band of music, mostly made up of these workmen.

THE WASH ROOM.

What is this room? we inquired, as we looked into one forty or fifty feet long, and saw three troughs full of clear water extending from one end to the other.

"That is the workmen's wash room. It is a necessity of the work of boring, turning, cutting, grinding, polishing iron, that it should be covered with oil, and men must get some of it upon their face and hands. Formerly, they had to go home as they were, and those who brought their dinners here had no conveniences of washing before eating. Now watch when the bell strikes, as it will in a minute, and you will see every foot of these long troughs occupied and you will see the men much improved in their appearance when they go out in the street, and when they get home, ready to sit down to dinner, or take the baby and have a romp with it and not soil its clothes."

Yes, we see a wash room, in such a manufactory, is one of the improvements of civilization. It is necessary for men who own houses, read newspapers, establish libraries, improve public parks, and write letters by the bushel as these do who make Wheeler & Wilson sewing-machines.

THE NAME OF THIS MACHINE.

The name is accidental. A. B. Wilson was an inventor. Nathaniel Wheeler was a manufacturer, and circumstances brought them together, and their joint productions were called the "Wheeler & Wilson Machines." In 1852 they turned out from a small shop in Watertown, Conn., eight or ten machines a week, mostly hand made, and coarse compared with those made for less than half the cost in 1862. The following numbers made in succeeding years show an unparalleled increase, and the way the public have appreciated the invention: In 1853, 799; 1854, 956; 1855, 1,171; 1856, 2,210; 1857, 4,591; 1858, 7,978; 1859, 21,306; 1860, 19,265; 1861, 19,725. The make of the last year would have been very much larger but for the total annihilation of all Southern trade.

The Wheeler & Wilson Company is composed of a company of stockholders, which is managed by a President and Directors, and it is only an act of the most simple justice to the stockholders and the public to say that it is the opinion of the public who know him, that no company ever had a more efficient President than Nathaniel Wheeler, who has never hesitated a moment in the faith that the world would appreciate a good sewing-machine sufficiently to recompense the manufacturers for an outlay of half a million of dollars in facilities for manufacturing; and he has always been ready to adopt every improvement, until the perfection of workmanship and hight of ornamentation, combined with usefulness, have nearly been achieved.

SAVING OF MONEY AND LABOR IN THE USE OF SEWING MACHINES.

The following calculation only approximates the saving of time, which is money, by the use of sewing-machines. The writer gives a fair calculation upon only four articles for which the machine is used, yet look at the sum total. Look, too, at the time saved in every family, and think of the aggregate.

If we calculate the annual average profit arising from the use of sewing-machines at $25 each, which is a very reasonable sum, considering how many of them are in daily use, it would give $955,125 for those manufactured in the year 1861, under Howe's patent, to say nothing of all previously made, or those made under other patents.

We give the following item as a trustworthy calculation of saving:

The importance of the sewing-machine to the manufacturing interests of the United States is estimated at $340,000,000 annually. The annual saving by the machine is estimated, on

Men's and Boys' Clothing in New-York City alone..	$7,500,000
Hats and Caps..........	462,500
Shirt Bosoms..........	632,750
Boots and Shoes in Massachusetts..........	7,500,000

It has revolutionized thirty-seven distinct departments of manufactures, and in no branch of sewing can it be dispensed with where time and health are regarded.

In Troy, N. Y., where the first practical trial of the Wheeler & Wilson Sewing-Machine was made, in 1852, for shirt work, about 3,000 are now used; and in the shirt manufactory of Messrs. Winchester & Davies, where the second trial was made, 400 are now used. The number of shirts manufactured at this establishment is about 10,000 per week. A machine with an attendant will do the work of six hands; and the estimated saving annually, by using the machine, is $240,000. The shirts are improved in quality, and very many who could not do even passable work by hand, become prime workers on the machine. Indeed, less talent is required for a machine operator than for hand sewing.

The number of shirt bosoms manufactured in the City of New-York is estimated at 36,000 per day, or upward of 10,000,000 annually, forming seams long enough to extend around the globe. An operator with a machine can stitch 100 to 150 per day, or, if the machine be run by power, twice that number; while by hand, six bosoms would be a hard day's work.

The sewing-machine is second in importance to no other mechanical agent of human power, and it is no experiment; it is an acknowledged fact. It is not only a necessity to all manufacturers where stitches are used, but it is a family necessity, one that no family can afford to do without.

The sewing machine compares with hand labor as the steam engine does with horse-power.

The Wheeler & Wilson Company has prepared tables showing, by actual experiments of four different workers, the time required to stitch each part of a garment by hand, and with this sewing-machine. Subjoined is a summary of several of the tables:

	By Machine. Hours.	By Machine. Minutes.	By Hand. Hours.	By Hand. Minutes.
Gentlemen's Shirts....	1	16	14	26
Frock Coats....	2	38	16	35
Satin Vests....	1	14	7	19
Linen Vests....	0	48	5	14
Cloth Pants....	0	51	5	10
Summer Pants....	0	38	2	50
Silk Dress....	1	13	8	27
Merino Dress....	1	4	8	27
Calico Dress....	0	57	6	37
Chemise....	1	1	10	31
Moreen Skirt....	0	35	7	28
Muslin Skirt....	0	30	7	1
Drawers....	0	28	4	6
Night Dress....	1	7	10	2
Silk Apron....	0	15	4	16
Plain Apron....	0	9	1	26

NUMBER OF STITCHES MADE PER MINUTE.

	By Hand.	With Machine.	Ratio.
Stitching fine Linen..........	23	640	28
Stitching Satin..........	24	520	22
Stitching Silk..........	30	550	18
Seaming fine Cloth..........	38	594	18
Patent Leather, fine stitching..	7	175	25
Fitting Ladies' Gaiters..........	28	510	18
Stitching Shoe Vamps..........	10	210	21
Binding Hats..........	33	374	11

When the machines are driven by power, the ratio is much higher—1,500 and 2,000 stitches per minute not being an unusual average.

Seams of a considerable length are ordinarily sewed, with the best machines, at the rate of a yard a minute, and that, too, in a manner far superior to hand-sewing.

Garments are now made entirely by it, with the exception of sewing on buttons and the like. Laces are stitched on; folds, tucks, gathers and plaits are laid and stitched; cord run in, binding put on, quilting done after elaborate and beautiful designs.

The variety of work done with it is almost inconceivable. It sews leather or cloth, from the stoutest woolen down to the finest cambric, turning the most delicate hem of a lady's handkerchief without any assistance or attention from the operator. It will stitch up and sew in the sleeves of a gentleman's coat, and one form of it was invented to work button holes.

We also find that by a recent attachment to the Wheeler & Wilson machine that seams can be corded, or ornamental embroidery by cording can be put on with great rapidity.

For nearly ten years we have had a Wheeler & Wilson machine as a constant companion in the ordinary family sitting room, having purchased one when the plainest sort sold for $100. From time to time we have adopted most of the new improvements, but the original idea remains, and will forever. We look upon this machine as the good genius of the household.

WHO BUYS AND USES THE MACHINES.

It is estimated that there are now in use in the City of New-York and vicinity not less than 20,000 Wheeler & Wilson Sewing-Machines, and there, where they are best known, is where they still sell best.

Instead of injuring the trade of the seamstress, it has proved to her a blessing. It has created work for her. It is used in such a variety of ways, and so cheapened clothing that it has created demand, and given more employment to sewing women, and improved their health and comfort.

A rent collector tells us that he never fears to trust a woman who owns one of these machines.

We sincerely hope that the time will soon come when every foot of the five acres of flooring of the Wheeler & Wilson Sewing-Machine manufactory will be fully occupied by 800 men, who will find room to work, and who by driving the present machinery, turn out 100,000 sewing-machines in a year. Then they could be still further reduced in price, and then every family could be provided with one of these indispensable articles.

Passengers Arrived

In steamship Roanoke, from Havana—T. C. Lyon, August Richer, G. Dieco, A. Cooper, V. Noys, Rev. Edward Bayard, [illegible]. Total 198.

In bark N. H. Gaston, from Santa Cruz—Mrs. Cobia and son, Mr. McDonald, Mr. Onderdonk.

MINIATURE ALMANAC.

Sun—Rises....4:36 | Sets....7:17 | Moon—Rises. 1:20
Sandy Hook.. 3:45 | Gov. Island... 4:35 | Hell-Gate.... 6:10

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PORT OF NEW-YORK........MAY 22.

Cleared.

Steamship—Plantagenet (Br.), Beard, Kingston, Walden & Booth.

Ships—Guy Mannering, Dollard, Liverpool, R. L. Taylor; Atrato, [illegible].

[illegible]

Arrived.

Steamship Roanoke, Couch, Havana May 17, mdse. and passengers to Ludlam, Heineken & Co. [illegible]

[illegible]

Disasters, &c.

BUFFALO, May 22, 1862. [illegible]

[illegible]

Spoken.

May 20, off the Highlands, brig H. S. Stetson, from Porto Rico for Boston.—By pilot-boat Mary E. Fish (No. 6).